

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776381

Luminaire Tested: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776381
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B057-HCD62TRMW)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD62TRMW-4000lm-3000K
Description: 6 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4342.1 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.11 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

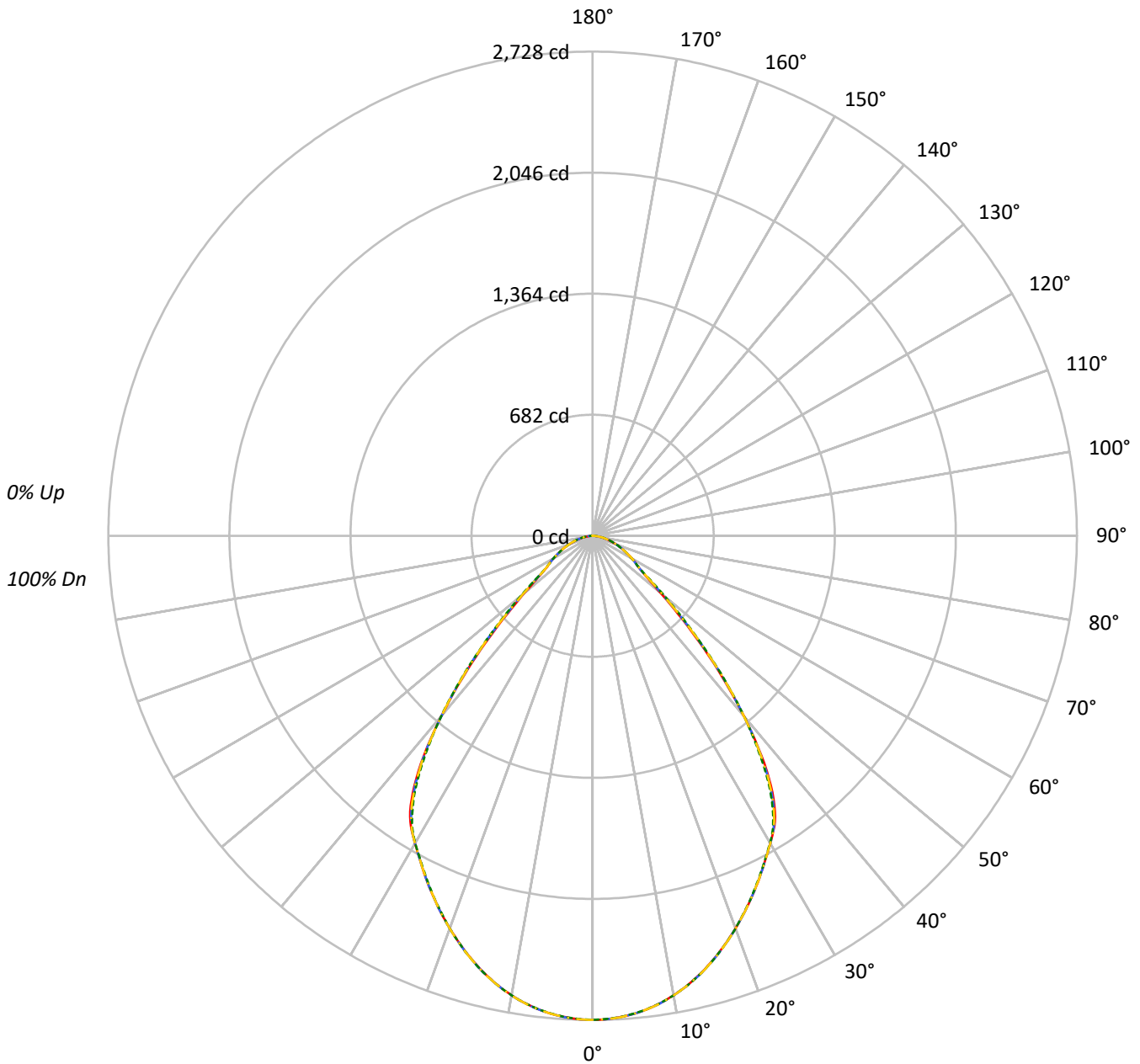
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71								
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63								
5	84	74	66	61	82	73	66	61	71	65	60	69	64	59	67	63	59	57								
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52								
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47								
8	69	58	51	45	68	57	50	45	56	50	45	55	49	45	54	49	45	43								
9	65	54	47	42	64	53	46	42	52	46	41	51	45	41	50	45	41	40								
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	149522	149522	149522	149522
5°	148739	148673	148739	148673
10°	146362	146362	146362	146362
15°	142362	142430	142362	142430
20°	137317	137270	137317	137270
25°	131869	131657	131869	131657
30°	126678	126481	126678	126481
35°	118139	116406	118139	116406
40°	94821	94935	94821	94935
45°	66348	68356	66348	68356
50°	42421	45193	42421	45193
55°	30852	31339	30852	31339
60°	28013	27893	28013	27893
65°	25178	25074	25178	25074
70°	22327	22648	22327	22648
75°	19486	20482	19486	20482
80°	16069	18153	16069	18153
85°	9875	15033	9875	15033

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 68356 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.7	5.9
10°-20°	705.4	16.2
20°-30°	1003.1	23.1
30°-40°	1072.4	24.7
40°-50°	677.6	15.6
50°-60°	308.4	7.1
60°-70°	193.1	4.4
70°-80°	101.5	2.3
80°-90°	25.0	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1964.3	45.2
0°-40°	3036.6	69.9
0°-60°	4022.6	92.6
0°-90°	4342.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4342.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2728	2728	2728	2728	2728	
5°	2703	2702	2703	2702	2703	256
15°	2508	2510	2508	2510	2508	705
25°	2180	2177	2180	2177	2180	1003
35°	1765	1739	1765	1739	1765	1077
45°	856	882	856	882	856	668
55°	323	328	323	328	323	304
65°	194	193	194	193	194	193
75°	92	97	92	97	92	98
85°	16	24	16	24	16	21
90°	0	1	0	1	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5
0.5°	2727.2	2727.5	2727.2	2727.2	2726.0	2727.2	2727.2	2727.5	2727.2	2727.5	2727.2
1°	2726.4	2726.8	2726.8	2726.4	2725.2	2726.4	2726.8	2726.8	2726.4	2726.8	2726.8
1.5°	2725.2	2725.6	2725.2	2725.2	2724.0	2725.2	2725.2	2725.6	2725.2	2725.6	2725.2
2°	2723.6	2723.6	2723.6	2723.6	2722.1	2723.6	2723.6	2723.6	2723.6	2723.6	2723.6
2.5°	2721.3	2721.3	2721.7	2721.3	2720.1	2721.3	2721.7	2721.3	2721.3	2721.3	2721.7
3°	2718.5	2718.9	2718.9	2718.9	2717.4	2718.9	2718.9	2718.9	2718.5	2718.9	2718.9
3.5°	2715.4	2715.4	2715.8	2715.8	2714.2	2715.8	2715.8	2715.4	2715.4	2715.4	2715.8
4°	2711.9	2711.9	2711.9	2711.9	2710.7	2711.9	2711.9	2711.9	2711.9	2711.9	2711.9
4.5°	2707.6	2708.0	2708.0	2708.0	2706.4	2708.0	2708.0	2708.0	2707.6	2708.0	2708.0
5°	2702.9	2703.3	2703.3	2703.3	2701.7	2703.3	2703.3	2703.3	2702.9	2703.3	2703.3
5.5°	2697.8	2698.2	2698.2	2698.2	2696.6	2698.2	2698.2	2698.2	2697.8	2698.2	2698.2
6°	2692.3	2692.3	2692.3	2692.3	2691.1	2692.3	2692.3	2692.3	2692.3	2692.3	2692.3
6.5°	2686.1	2686.1	2686.5	2686.5	2685.3	2686.5	2686.5	2686.1	2686.1	2686.1	2686.5
7°	2679.4	2679.8	2679.8	2679.8	2678.6	2679.8	2679.8	2679.8	2679.4	2679.8	2679.8
7.5°	2672.4	2672.4	2672.8	2672.8	2671.6	2672.8	2672.8	2672.4	2672.4	2672.4	2672.8
8°	2664.5	2664.9	2665.3	2665.3	2664.1	2665.3	2665.3	2664.9	2664.5	2664.9	2665.3
8.5°	2656.3	2656.7	2657.1	2657.1	2655.9	2657.1	2657.1	2656.7	2656.3	2656.7	2657.1
9°	2647.7	2648.1	2648.5	2648.9	2647.7	2648.9	2648.5	2648.1	2647.7	2648.1	2648.5
9.5°	2638.7	2639.1	2639.5	2639.9	2638.7	2639.9	2639.5	2639.1	2638.7	2639.1	2639.5
10°	2629.3	2629.3	2629.7	2630.5	2629.3	2630.5	2629.7	2629.3	2629.3	2629.3	2629.7
10.5°	2619.1	2619.1	2619.9	2620.3	2619.1	2620.3	2619.9	2619.1	2619.1	2619.1	2619.9
11°	2608.6	2608.6	2609.4	2610.1	2608.6	2610.1	2609.4	2608.6	2608.6	2608.6	2609.4
11.5°	2597.2	2597.6	2598.4	2599.2	2598.0	2599.2	2598.4	2597.6	2597.2	2597.6	2598.4
12°	2585.9	2586.3	2587.1	2587.8	2586.7	2587.8	2587.1	2586.3	2585.9	2586.3	2587.1
12.5°	2574.1	2574.5	2574.9	2575.7	2574.9	2575.7	2574.9	2574.5	2574.1	2574.5	2574.9
13°	2561.6	2562.0	2562.8	2563.6	2562.8	2563.6	2562.8	2562.0	2561.6	2562.0	2562.8
13.5°	2549.1	2549.5	2550.3	2551.1	2549.9	2551.1	2550.3	2549.5	2549.1	2549.5	2550.3
14°	2535.8	2536.6	2537.4	2537.7	2537.0	2537.7	2537.4	2536.6	2535.8	2536.6	2537.4
14.5°	2522.5	2522.9	2523.7	2524.4	2523.7	2524.4	2523.7	2522.9	2522.5	2522.9	2523.7
15°	2508.4	2509.2	2510.0	2510.7	2509.6	2510.7	2510.0	2509.2	2508.4	2509.2	2510.0
15.5°	2494.3	2494.7	2495.5	2496.3	2495.1	2496.3	2495.5	2494.7	2494.3	2494.7	2495.5
16°	2479.4	2480.2	2481.0	2481.8	2480.6	2481.8	2481.0	2480.2	2479.4	2480.2	2481.0
16.5°	2465.0	2465.4	2466.1	2466.9	2465.7	2466.9	2466.1	2465.4	2465.0	2465.4	2466.1
17°	2449.7	2450.1	2450.9	2451.7	2450.5	2451.7	2450.9	2450.1	2449.7	2450.1	2450.9
17.5°	2434.4	2434.4	2435.2	2436.0	2434.8	2436.0	2435.2	2434.4	2434.4	2434.4	2435.2
18°	2418.4	2419.2	2419.6	2420.0	2418.8	2420.0	2419.6	2419.2	2418.4	2419.2	2419.6
18.5°	2402.4	2403.1	2403.5	2403.9	2402.7	2403.9	2403.5	2403.1	2402.4	2403.1	2403.5
19°	2386.3	2387.1	2387.5	2387.5	2386.7	2387.5	2387.5	2387.1	2386.3	2387.1	2387.5
19.5°	2370.3	2370.7	2371.0	2371.4	2370.3	2371.4	2371.0	2370.7	2370.3	2370.7	2371.0
20°	2353.8	2354.2	2354.6	2354.6	2353.0	2354.6	2354.6	2354.2	2353.8	2354.2	2354.6
20.5°	2337.4	2337.4	2337.4	2337.4	2336.2	2337.4	2337.4	2337.4	2337.4	2337.4	2337.4
21°	2319.8	2320.2	2320.6	2320.2	2319.0	2320.2	2320.6	2320.2	2319.8	2320.2	2320.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2268.9	2268.9	2268.5	2268.1	2266.6	2268.1	2268.5	2268.9	2268.9	2268.9	2268.5
23°	2251.3	2251.3	2250.9	2250.5	2249.0	2250.5	2250.9	2251.3	2251.3	2251.3	2250.9
23.5°	2233.7	2233.7	2233.3	2232.5	2231.3	2232.5	2233.3	2233.7	2233.7	2233.7	2233.3
24°	2216.1	2216.1	2215.7	2214.5	2212.9	2214.5	2215.7	2216.1	2216.1	2216.1	2215.7
24.5°	2198.5	2198.1	2197.7	2196.5	2194.9	2196.5	2197.7	2198.1	2198.5	2198.1	2197.7
25°	2180.1	2180.1	2179.7	2178.5	2176.6	2178.5	2179.7	2180.1	2180.1	2180.1	2179.7
25.5°	2162.1	2162.1	2161.7	2160.1	2158.6	2160.1	2161.7	2162.1	2162.1	2162.1	2161.7
26°	2144.1	2144.1	2143.7	2142.5	2140.6	2142.5	2143.7	2144.1	2144.1	2144.1	2143.7
26.5°	2125.7	2125.7	2125.3	2123.7	2122.2	2123.7	2125.3	2125.7	2125.7	2125.7	2125.3
27°	2107.3	2107.7	2107.3	2105.7	2103.8	2105.7	2107.3	2107.7	2107.3	2107.7	2107.3
27.5°	2089.3	2089.3	2088.9	2087.7	2085.8	2087.7	2088.9	2089.3	2089.3	2089.3	2088.9
28°	2070.5	2071.3	2070.9	2069.7	2068.2	2069.7	2070.9	2071.3	2070.5	2071.3	2070.9
28.5°	2052.9	2053.7	2053.3	2052.1	2050.5	2052.1	2053.3	2053.7	2052.9	2053.7	2053.3
29°	2035.3	2036.1	2035.7	2034.9	2032.9	2034.9	2035.7	2036.1	2035.3	2036.1	2035.7
29.5°	2018.1	2018.5	2018.5	2017.3	2015.7	2017.3	2018.5	2018.5	2018.1	2018.5	2018.5
30°	2001.2	2001.2	2001.2	1999.7	1998.1	1999.7	2001.2	2001.2	2001.2	2001.2	2001.2
30.5°	1984.0	1984.4	1983.6	1982.5	1980.5	1982.5	1983.6	1984.4	1984.0	1984.4	1983.6
31°	1967.2	1967.2	1966.4	1964.5	1962.1	1964.5	1966.4	1967.2	1967.2	1967.2	1966.4
31.5°	1949.2	1949.2	1947.6	1945.7	1942.5	1945.7	1947.6	1949.2	1949.2	1949.2	1947.6
32°	1930.8	1929.6	1926.9	1923.4	1919.1	1923.4	1926.9	1929.6	1930.8	1929.6	1926.9
32.5°	1910.8	1908.1	1903.8	1897.9	1892.8	1897.9	1903.8	1908.1	1910.8	1908.1	1903.8
33°	1888.1	1885.0	1877.6	1870.9	1865.5	1870.9	1877.6	1885.0	1888.1	1885.0	1877.6
33.5°	1861.9	1859.2	1849.0	1842.0	1836.5	1842.0	1849.0	1859.2	1861.9	1859.2	1849.0
34°	1832.2	1831.0	1818.9	1811.1	1806.4	1811.1	1818.9	1831.0	1832.2	1831.0	1818.9
34.5°	1799.7	1797.8	1786.8	1778.2	1773.9	1778.2	1786.8	1797.8	1799.7	1797.8	1786.8
35°	1765.3	1762.1	1752.7	1743.4	1739.4	1743.4	1752.7	1762.1	1765.3	1762.1	1752.7
35.5°	1728.9	1724.6	1717.1	1707.4	1702.3	1707.4	1717.1	1724.6	1728.9	1724.6	1717.1
36°	1690.1	1684.7	1680.0	1670.2	1663.9	1670.2	1680.0	1684.7	1690.1	1684.7	1680.0
36.5°	1649.4	1643.6	1640.4	1631.0	1623.2	1631.0	1640.4	1643.6	1649.4	1643.6	1640.4
37°	1606.8	1601.3	1599.0	1590.3	1582.5	1590.3	1599.0	1601.3	1606.8	1601.3	1599.0
37.5°	1562.2	1558.3	1555.9	1548.9	1541.0	1548.9	1555.9	1558.3	1562.2	1558.3	1555.9
38°	1516.0	1513.6	1511.3	1506.6	1500.0	1506.6	1511.3	1513.6	1516.0	1513.6	1511.3
38.5°	1468.6	1468.6	1464.7	1463.2	1457.3	1463.2	1464.7	1468.6	1468.6	1468.6	1464.7
39°	1421.7	1422.5	1418.6	1418.2	1415.8	1418.2	1418.6	1422.5	1421.7	1422.5	1418.6
39.5°	1373.6	1374.7	1370.8	1372.0	1371.6	1372.0	1370.8	1374.7	1373.6	1374.7	1370.8
40°	1325.0	1327.4	1323.9	1325.8	1326.6	1325.8	1323.9	1327.4	1325.0	1327.4	1323.9
40.5°	1275.7	1279.2	1276.9	1280.0	1280.8	1280.0	1276.9	1279.2	1275.7	1279.2	1276.9
41°	1227.6	1231.5	1230.7	1233.5	1236.2	1233.5	1230.7	1231.5	1227.6	1231.5	1230.7
41.5°	1179.8	1182.6	1184.9	1188.5	1189.6	1188.5	1184.9	1182.6	1179.8	1182.6	1184.9
42°	1132.1	1134.5	1139.2	1142.3	1145.4	1142.3	1139.2	1134.5	1132.1	1134.5	1139.2
42.5°	1084.8	1087.1	1093.8	1097.7	1100.4	1097.7	1093.8	1087.1	1084.8	1087.1	1093.8
43°	1037.4	1040.5	1049.1	1052.7	1055.4	1052.7	1049.1	1040.5	1037.4	1040.5	1049.1
43.5°	990.8	993.6	1004.1	1007.7	1010.0	1007.7	1004.1	993.6	990.8	993.6	1004.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	855.8	860.5	872.3	878.9	881.7	878.9	872.3	860.5	855.8	860.5	872.3
45.5°	812.4	818.3	830.4	837.8	840.6	837.8	830.4	818.3	812.4	818.3	830.4
46°	770.9	777.6	789.3	797.9	801.4	797.9	789.3	777.6	770.9	777.6	789.3
46.5°	730.6	738.0	749.4	759.2	763.1	759.2	749.4	738.0	730.6	738.0	749.4
47°	691.5	699.7	710.6	721.2	725.5	721.2	710.6	699.7	691.5	699.7	710.6
47.5°	654.3	662.1	673.9	684.8	688.7	684.8	673.9	662.1	654.3	662.1	673.9
48°	619.1	626.9	638.6	650.0	654.3	650.0	638.6	626.9	619.1	626.9	638.6
48.5°	586.2	592.9	604.6	616.3	621.0	616.3	604.6	592.9	586.2	592.9	604.6
49°	554.5	560.8	572.1	584.6	588.9	584.6	572.1	560.8	554.5	560.8	572.1
49.5°	524.8	530.2	542.0	553.7	558.8	553.7	542.0	530.2	524.8	530.2	542.0
50°	497.4	501.3	513.4	525.2	529.9	525.2	513.4	501.3	497.4	501.3	513.4
50.5°	471.9	474.7	486.8	497.8	502.5	497.8	486.8	474.7	471.9	474.7	486.8
51°	448.5	450.8	461.8	471.5	477.0	471.5	461.8	450.8	448.5	450.8	461.8
51.5°	426.5	428.5	438.7	447.7	452.8	447.7	438.7	428.5	426.5	428.5	438.7
52°	406.6	408.5	417.9	425.4	429.7	425.4	417.9	408.5	406.6	408.5	417.9
52.5°	388.2	389.8	398.0	404.2	408.2	404.2	398.0	389.8	388.2	389.8	398.0
53°	371.4	374.1	380.0	385.1	388.2	385.1	380.0	374.1	371.4	374.1	380.0
53.5°	358.1	359.6	363.5	367.8	370.2	367.8	363.5	359.6	358.1	359.6	363.5
54°	345.5	345.9	348.7	351.8	353.8	351.8	348.7	345.9	345.5	345.9	348.7
54.5°	334.2	334.2	335.4	337.7	340.1	337.7	335.4	334.2	334.2	334.2	335.4
55°	322.8	323.2	324.8	326.4	327.9	326.4	324.8	323.2	322.8	323.2	324.8
55.5°	312.3	313.8	315.4	316.6	319.3	316.6	315.4	313.8	312.3	313.8	315.4
56°	304.8	305.6	306.8	307.6	310.7	307.6	306.8	305.6	304.8	305.6	306.8
56.5°	298.6	298.6	298.6	299.4	302.1	299.4	298.6	298.6	298.6	298.6	298.6
57°	292.7	292.7	291.9	291.5	293.5	291.5	291.9	292.7	292.7	292.7	291.9
57.5°	287.2	286.8	286.1	285.3	284.9	285.3	286.1	286.8	287.2	286.8	286.1
58°	281.4	281.0	280.2	279.4	278.6	279.4	280.2	281.0	281.4	281.0	280.2
58.5°	275.1	274.7	273.9	273.1	272.8	273.1	273.9	274.7	275.1	274.7	273.9
59°	268.8	268.4	268.1	267.3	266.5	267.3	268.1	268.4	268.8	268.4	268.1
59.5°	262.2	262.2	261.4	261.0	260.6	261.0	261.4	262.2	262.2	262.2	261.4
60°	255.5	255.5	255.1	254.8	254.4	254.8	255.1	255.5	255.5	255.5	255.1
60.5°	248.9	248.9	248.5	248.1	247.7	248.1	248.5	248.9	248.9	248.9	248.5
61°	242.6	242.6	242.2	241.8	241.4	241.8	242.2	242.6	242.6	242.6	242.2
61.5°	236.4	236.4	236.0	235.6	235.2	235.6	236.0	236.4	236.4	236.4	236.0
62°	230.1	230.1	229.7	229.3	228.9	229.3	229.7	230.1	230.1	230.1	229.7
62.5°	223.8	223.8	223.4	223.1	222.7	223.1	223.4	223.8	223.8	223.8	223.4
63°	218.0	217.6	217.6	216.8	216.8	216.8	217.6	217.6	218.0	217.6	217.6
63.5°	211.7	211.7	211.3	210.9	210.9	210.9	211.3	211.7	211.7	211.7	211.3
64°	205.8	205.8	205.4	205.1	204.7	205.1	205.4	205.8	205.8	205.8	205.4
64.5°	200.0	200.0	199.6	199.2	199.2	199.2	199.6	200.0	200.0	200.0	199.6
65°	194.1	194.5	194.1	193.7	193.3	193.7	194.1	194.5	194.1	194.5	194.1
65.5°	188.2	188.6	188.6	188.2	187.8	188.2	188.6	188.6	188.2	188.6	188.6
66°	182.7	183.1	182.7	182.4	182.4	182.4	182.7	183.1	182.7	183.1	182.7



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	165.9	166.7	166.7	166.3	166.3	166.3	166.7	166.7	165.9	166.7	166.7
68°	160.4	161.2	161.6	161.2	161.2	161.2	161.6	161.2	160.4	161.2	161.6
68.5°	155.4	156.1	156.5	156.1	156.1	156.1	156.5	156.1	155.4	156.1	156.5
69°	149.9	151.1	151.4	151.4	151.1	151.4	151.4	151.1	149.9	151.1	151.4
69.5°	144.4	146.0	146.7	146.4	146.4	146.4	146.7	146.0	144.4	146.0	146.7
70°	139.3	140.5	141.7	141.7	141.3	141.7	141.7	140.5	139.3	140.5	141.7
70.5°	134.2	135.8	137.0	136.6	136.6	136.6	137.0	135.8	134.2	135.8	137.0
71°	129.5	131.1	132.3	132.3	131.9	132.3	132.3	131.1	129.5	131.1	132.3
71.5°	124.4	126.0	127.6	127.6	127.2	127.6	127.6	126.0	124.4	126.0	127.6
72°	119.7	121.3	122.9	122.9	122.5	122.9	122.9	121.3	119.7	121.3	122.9
72.5°	115.0	116.6	118.6	118.2	118.2	118.2	118.6	116.6	115.0	116.6	118.6
73°	110.0	111.9	113.9	113.9	113.5	113.9	113.9	111.9	110.0	111.9	113.9
73.5°	105.3	107.2	109.6	109.6	109.2	109.6	109.6	107.2	105.3	107.2	109.6
74°	101.0	102.5	104.9	105.3	104.9	105.3	104.9	102.5	101.0	102.5	104.9
74.5°	96.3	98.2	100.6	101.0	100.6	101.0	100.6	98.2	96.3	98.2	100.6
75°	92.0	93.5	96.3	96.7	96.7	96.7	96.3	93.5	92.0	93.5	96.3
75.5°	87.7	89.2	92.4	92.4	92.4	92.4	92.4	89.2	87.7	89.2	92.4
76°	83.4	84.9	88.0	88.4	88.4	88.4	88.0	84.9	83.4	84.9	88.0
76.5°	79.0	80.6	83.7	84.5	84.1	84.5	83.7	80.6	79.0	80.6	83.7
77°	74.7	76.7	79.8	80.6	80.2	80.6	79.8	76.7	74.7	76.7	79.8
77.5°	70.4	72.4	75.9	76.7	76.3	76.7	75.9	72.4	70.4	72.4	75.9
78°	66.5	68.5	71.6	72.8	72.4	72.8	71.6	68.5	66.5	68.5	71.6
78.5°	62.6	64.2	67.7	68.9	68.9	68.9	67.7	64.2	62.6	64.2	67.7
79°	58.7	60.3	63.8	65.0	65.0	65.0	63.8	60.3	58.7	60.3	63.8
79.5°	54.8	56.4	60.3	61.4	61.4	61.4	60.3	56.4	54.8	56.4	60.3
80°	50.9	52.4	56.4	57.5	57.5	57.5	56.4	52.4	50.9	52.4	56.4
80.5°	47.4	48.9	52.8	54.0	54.0	54.0	52.8	48.9	47.4	48.9	52.8
81°	43.4	45.0	48.9	50.5	50.5	50.5	48.9	45.0	43.4	45.0	48.9
81.5°	39.9	41.1	45.4	47.0	47.0	47.0	45.4	41.1	39.9	41.1	45.4
82°	36.4	37.6	41.9	43.4	43.4	43.4	41.9	37.6	36.4	37.6	41.9
82.5°	32.5	34.0	38.3	40.3	40.3	40.3	38.3	34.0	32.5	34.0	38.3
83°	29.0	30.5	34.8	36.8	36.8	36.8	34.8	30.5	29.0	30.5	34.8
83.5°	25.4	27.0	31.7	33.7	33.3	33.7	31.7	27.0	25.4	27.0	31.7
84°	22.3	23.5	28.6	30.1	30.1	30.1	28.6	23.5	22.3	23.5	28.6
84.5°	18.8	20.0	25.4	27.0	27.0	27.0	25.4	20.0	18.8	20.0	25.4
85°	15.7	16.8	22.3	23.9	23.9	23.9	22.3	16.8	15.7	16.8	22.3
85.5°	12.5	14.1	19.2	20.7	20.7	20.7	19.2	14.1	12.5	14.1	19.2
86°	10.2	11.3	16.4	17.6	17.6	17.6	16.4	11.3	10.2	11.3	16.4
86.5°	8.2	9.4	13.3	14.5	14.9	14.5	13.3	9.4	8.2	9.4	13.3
87°	6.3	7.4	11.0	11.7	11.7	11.7	11.0	7.4	6.3	7.4	11.0
87.5°	4.7	5.5	8.2	9.0	9.0	9.0	8.2	5.5	4.7	5.5	8.2
88°	3.1	3.9	5.9	6.3	6.7	6.3	5.9	3.9	3.1	3.9	5.9
88.5°	1.6	2.3	3.9	4.7	5.1	4.7	3.9	2.3	1.6	2.3	3.9



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.4	0.4	0.8	1.2	0.8	0.4	0.4	0.0	0.4	0.4



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2727.5	2727.5	2727.5	2727.5	2727.5	2727.5
0.5°	2727.2	2726.0	2727.2	2727.2	2727.5	2727.2
1°	2726.4	2725.2	2726.4	2726.8	2726.8	2726.4
1.5°	2725.2	2724.0	2725.2	2725.2	2725.6	2725.2
2°	2723.6	2722.1	2723.6	2723.6	2723.6	2723.6
2.5°	2721.3	2720.1	2721.3	2721.7	2721.3	2721.3
3°	2718.9	2717.4	2718.9	2718.9	2718.9	2718.5
3.5°	2715.8	2714.2	2715.8	2715.8	2715.4	2715.4
4°	2711.9	2710.7	2711.9	2711.9	2711.9	2711.9
4.5°	2708.0	2706.4	2708.0	2708.0	2708.0	2707.6
5°	2703.3	2701.7	2703.3	2703.3	2703.3	2702.9
5.5°	2698.2	2696.6	2698.2	2698.2	2698.2	2697.8
6°	2692.3	2691.1	2692.3	2692.3	2692.3	2692.3
6.5°	2686.5	2685.3	2686.5	2686.5	2686.1	2686.1
7°	2679.8	2678.6	2679.8	2679.8	2679.8	2679.4
7.5°	2672.8	2671.6	2672.8	2672.8	2672.4	2672.4
8°	2665.3	2664.1	2665.3	2665.3	2664.9	2664.5
8.5°	2657.1	2655.9	2657.1	2657.1	2656.7	2656.3
9°	2648.9	2647.7	2648.9	2648.5	2648.1	2647.7
9.5°	2639.9	2638.7	2639.9	2639.5	2639.1	2638.7
10°	2630.5	2629.3	2630.5	2629.7	2629.3	2629.3
10.5°	2620.3	2619.1	2620.3	2619.9	2619.1	2619.1
11°	2610.1	2608.6	2610.1	2609.4	2608.6	2608.6
11.5°	2599.2	2598.0	2599.2	2598.4	2597.6	2597.2
12°	2587.8	2586.7	2587.8	2587.1	2586.3	2585.9
12.5°	2575.7	2574.9	2575.7	2574.9	2574.5	2574.1
13°	2563.6	2562.8	2563.6	2562.8	2562.0	2561.6
13.5°	2551.1	2549.9	2551.1	2550.3	2549.5	2549.1
14°	2537.7	2537.0	2537.7	2537.4	2536.6	2535.8
14.5°	2524.4	2523.7	2524.4	2523.7	2522.9	2522.5
15°	2510.7	2509.6	2510.7	2510.0	2509.2	2508.4
15.5°	2496.3	2495.1	2496.3	2495.5	2494.7	2494.3
16°	2481.8	2480.6	2481.8	2481.0	2480.2	2479.4
16.5°	2466.9	2465.7	2466.9	2466.1	2465.4	2465.0
17°	2451.7	2450.5	2451.7	2450.9	2450.1	2449.7
17.5°	2436.0	2434.8	2436.0	2435.2	2434.4	2434.4
18°	2420.0	2418.8	2420.0	2419.6	2419.2	2418.4
18.5°	2403.9	2402.7	2403.9	2403.5	2403.1	2402.4
19°	2387.5	2386.7	2387.5	2387.5	2387.1	2386.3
19.5°	2371.4	2370.3	2371.4	2371.0	2370.7	2370.3
20°	2354.6	2353.0	2354.6	2354.6	2354.2	2353.8
20.5°	2337.4	2336.2	2337.4	2337.4	2337.4	2337.4
21°	2320.2	2319.0	2320.2	2320.6	2320.2	2319.8



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2268.1	2266.6	2268.1	2268.5	2268.9	2268.9
23°	2250.5	2249.0	2250.5	2250.9	2251.3	2251.3
23.5°	2232.5	2231.3	2232.5	2233.3	2233.7	2233.7
24°	2214.5	2212.9	2214.5	2215.7	2216.1	2216.1
24.5°	2196.5	2194.9	2196.5	2197.7	2198.1	2198.5
25°	2178.5	2176.6	2178.5	2179.7	2180.1	2180.1
25.5°	2160.1	2158.6	2160.1	2161.7	2162.1	2162.1
26°	2142.5	2140.6	2142.5	2143.7	2144.1	2144.1
26.5°	2123.7	2122.2	2123.7	2125.3	2125.7	2125.7
27°	2105.7	2103.8	2105.7	2107.3	2107.7	2107.3
27.5°	2087.7	2085.8	2087.7	2088.9	2089.3	2089.3
28°	2069.7	2068.2	2069.7	2070.9	2071.3	2070.5
28.5°	2052.1	2050.5	2052.1	2053.3	2053.7	2052.9
29°	2034.9	2032.9	2034.9	2035.7	2036.1	2035.3
29.5°	2017.3	2015.7	2017.3	2018.5	2018.5	2018.1
30°	1999.7	1998.1	1999.7	2001.2	2001.2	2001.2
30.5°	1982.5	1980.5	1982.5	1983.6	1984.4	1984.0
31°	1964.5	1962.1	1964.5	1966.4	1967.2	1967.2
31.5°	1945.7	1942.5	1945.7	1947.6	1949.2	1949.2
32°	1923.4	1919.1	1923.4	1926.9	1929.6	1930.8
32.5°	1897.9	1892.8	1897.9	1903.8	1908.1	1910.8
33°	1870.9	1865.5	1870.9	1877.6	1885.0	1888.1
33.5°	1842.0	1836.5	1842.0	1849.0	1859.2	1861.9
34°	1811.1	1806.4	1811.1	1818.9	1831.0	1832.2
34.5°	1778.2	1773.9	1778.2	1786.8	1797.8	1799.7
35°	1743.4	1739.4	1743.4	1752.7	1762.1	1765.3
35.5°	1707.4	1702.3	1707.4	1717.1	1724.6	1728.9
36°	1670.2	1663.9	1670.2	1680.0	1684.7	1690.1
36.5°	1631.0	1623.2	1631.0	1640.4	1643.6	1649.4
37°	1590.3	1582.5	1590.3	1599.0	1601.3	1606.8
37.5°	1548.9	1541.0	1548.9	1555.9	1558.3	1562.2
38°	1506.6	1500.0	1506.6	1511.3	1513.6	1516.0
38.5°	1463.2	1457.3	1463.2	1464.7	1468.6	1468.6
39°	1418.2	1415.8	1418.2	1418.6	1422.5	1421.7
39.5°	1372.0	1371.6	1372.0	1370.8	1374.7	1373.6
40°	1325.8	1326.6	1325.8	1323.9	1327.4	1325.0
40.5°	1280.0	1280.8	1280.0	1276.9	1279.2	1275.7
41°	1233.5	1236.2	1233.5	1230.7	1231.5	1227.6
41.5°	1188.5	1189.6	1188.5	1184.9	1182.6	1179.8
42°	1142.3	1145.4	1142.3	1139.2	1134.5	1132.1
42.5°	1097.7	1100.4	1097.7	1093.8	1087.1	1084.8
43°	1052.7	1055.4	1052.7	1049.1	1040.5	1037.4
43.5°	1007.7	1010.0	1007.7	1004.1	993.6	990.8



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	878.9	881.7	878.9	872.3	860.5	855.8
45.5°	837.8	840.6	837.8	830.4	818.3	812.4
46°	797.9	801.4	797.9	789.3	777.6	770.9
46.5°	759.2	763.1	759.2	749.4	738.0	730.6
47°	721.2	725.5	721.2	710.6	699.7	691.5
47.5°	684.8	688.7	684.8	673.9	662.1	654.3
48°	650.0	654.3	650.0	638.6	626.9	619.1
48.5°	616.3	621.0	616.3	604.6	592.9	586.2
49°	584.6	588.9	584.6	572.1	560.8	554.5
49.5°	553.7	558.8	553.7	542.0	530.2	524.8
50°	525.2	529.9	525.2	513.4	501.3	497.4
50.5°	497.8	502.5	497.8	486.8	474.7	471.9
51°	471.5	477.0	471.5	461.8	450.8	448.5
51.5°	447.7	452.8	447.7	438.7	428.5	426.5
52°	425.4	429.7	425.4	417.9	408.5	406.6
52.5°	404.2	408.2	404.2	398.0	389.8	388.2
53°	385.1	388.2	385.1	380.0	374.1	371.4
53.5°	367.8	370.2	367.8	363.5	359.6	358.1
54°	351.8	353.8	351.8	348.7	345.9	345.5
54.5°	337.7	340.1	337.7	335.4	334.2	334.2
55°	326.4	327.9	326.4	324.8	323.2	322.8
55.5°	316.6	319.3	316.6	315.4	313.8	312.3
56°	307.6	310.7	307.6	306.8	305.6	304.8
56.5°	299.4	302.1	299.4	298.6	298.6	298.6
57°	291.5	293.5	291.5	291.9	292.7	292.7
57.5°	285.3	284.9	285.3	286.1	286.8	287.2
58°	279.4	278.6	279.4	280.2	281.0	281.4
58.5°	273.1	272.8	273.1	273.9	274.7	275.1
59°	267.3	266.5	267.3	268.1	268.4	268.8
59.5°	261.0	260.6	261.0	261.4	262.2	262.2
60°	254.8	254.4	254.8	255.1	255.5	255.5
60.5°	248.1	247.7	248.1	248.5	248.9	248.9
61°	241.8	241.4	241.8	242.2	242.6	242.6
61.5°	235.6	235.2	235.6	236.0	236.4	236.4
62°	229.3	228.9	229.3	229.7	230.1	230.1
62.5°	223.1	222.7	223.1	223.4	223.8	223.8
63°	216.8	216.8	216.8	217.6	217.6	218.0
63.5°	210.9	210.9	210.9	211.3	211.7	211.7
64°	205.1	204.7	205.1	205.4	205.8	205.8
64.5°	199.2	199.2	199.2	199.6	200.0	200.0
65°	193.7	193.3	193.7	194.1	194.5	194.1
65.5°	188.2	187.8	188.2	188.6	188.6	188.2
66°	182.4	182.4	182.4	182.7	183.1	182.7



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	166.3	166.3	166.3	166.7	166.7	165.9
68°	161.2	161.2	161.2	161.6	161.2	160.4
68.5°	156.1	156.1	156.1	156.5	156.1	155.4
69°	151.4	151.1	151.4	151.4	151.1	149.9
69.5°	146.4	146.4	146.4	146.7	146.0	144.4
70°	141.7	141.3	141.7	141.7	140.5	139.3
70.5°	136.6	136.6	136.6	137.0	135.8	134.2
71°	132.3	131.9	132.3	132.3	131.1	129.5
71.5°	127.6	127.2	127.6	127.6	126.0	124.4
72°	122.9	122.5	122.9	122.9	121.3	119.7
72.5°	118.2	118.2	118.2	118.6	116.6	115.0
73°	113.9	113.5	113.9	113.9	111.9	110.0
73.5°	109.6	109.2	109.6	109.6	107.2	105.3
74°	105.3	104.9	105.3	104.9	102.5	101.0
74.5°	101.0	100.6	101.0	100.6	98.2	96.3
75°	96.7	96.7	96.7	96.3	93.5	92.0
75.5°	92.4	92.4	92.4	92.4	89.2	87.7
76°	88.4	88.4	88.4	88.0	84.9	83.4
76.5°	84.5	84.1	84.5	83.7	80.6	79.0
77°	80.6	80.2	80.6	79.8	76.7	74.7
77.5°	76.7	76.3	76.7	75.9	72.4	70.4
78°	72.8	72.4	72.8	71.6	68.5	66.5
78.5°	68.9	68.9	68.9	67.7	64.2	62.6
79°	65.0	65.0	65.0	63.8	60.3	58.7
79.5°	61.4	61.4	61.4	60.3	56.4	54.8
80°	57.5	57.5	57.5	56.4	52.4	50.9
80.5°	54.0	54.0	54.0	52.8	48.9	47.4
81°	50.5	50.5	50.5	48.9	45.0	43.4
81.5°	47.0	47.0	47.0	45.4	41.1	39.9
82°	43.4	43.4	43.4	41.9	37.6	36.4
82.5°	40.3	40.3	40.3	38.3	34.0	32.5
83°	36.8	36.8	36.8	34.8	30.5	29.0
83.5°	33.7	33.3	33.7	31.7	27.0	25.4
84°	30.1	30.1	30.1	28.6	23.5	22.3
84.5°	27.0	27.0	27.0	25.4	20.0	18.8
85°	23.9	23.9	23.9	22.3	16.8	15.7
85.5°	20.7	20.7	20.7	19.2	14.1	12.5
86°	17.6	17.6	17.6	16.4	11.3	10.2
86.5°	14.5	14.9	14.5	13.3	9.4	8.2
87°	11.7	11.7	11.7	11.0	7.4	6.3
87.5°	9.0	9.0	9.0	8.2	5.5	4.7
88°	6.3	6.7	6.3	5.9	3.9	3.1
88.5°	4.7	5.1	4.7	3.9	2.3	1.6



TEST NUMBER: P776381

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.8	1.2	0.8	0.4	0.4	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2303.0	2303.3	2303.0	2303.0	2301.8	2303.0	2303.0	2303.3	2303.0	2303.3	2303.0
22°	2286.1	2286.1	2286.1	2285.3	2284.2	2285.3	2286.1	2286.1	2286.1	2286.1	2286.1



44°	944.7	947.4	959.1	964.2	966.6	964.2	959.1	947.4	944.7	947.4	959.1
44.5°	899.3	903.6	914.9	921.2	923.5	921.2	914.9	903.6	899.3	903.6	914.9



66.5°	176.9	177.7	177.7	177.3	176.9	177.3	177.7	177.7	176.9	177.7	177.7
67°	171.4	172.2	172.2	171.8	171.4	171.8	172.2	172.2	171.4	172.2	172.2



89°	0.8	1.2	2.3	3.1	3.5	3.1	2.3	1.2	0.8	1.2	2.3
89.5°	0.4	0.4	1.2	2.0	2.3	2.0	1.2	0.4	0.4	0.4	1.2

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21.5°	2303.0	2301.8	2303.0	2303.0	2303.3	2303.0
22°	2285.3	2284.2	2285.3	2286.1	2286.1	2286.1



44°	964.2	966.6	964.2	959.1	947.4	944.7
44.5°	921.2	923.5	921.2	914.9	903.6	899.3



66.5°	177.3	176.9	177.3	177.7	177.7	176.9
67°	171.8	171.4	171.8	172.2	172.2	171.4



89°	3.1	3.5	3.1	2.3	1.2	0.8
89.5°	2.0	2.3	2.0	1.2	0.4	0.4

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)